

**Supplementary Table S1** Derived semen quality parameters [mean (95% CI)] according to the intake of sugar-sweetened beverages.

	Sugar-sweetened beverage				$P_{\text{trend}}^{\text{a}}$
	Q1	Q2	Q3	Q4	
N	48	45	48	48	
Sugar-sweetened beverage intake median, servings/day	0.11	0.42	0.95	2.72	
Total sperm count (millions)					
Crude	141 (103, 193)	123 (89, 170)	147 (107, 200)	147 (107, 200)	0.66
Model 1 <sup>b</sup>	137 (101, 186)	133 (97, 181)	155 (115, 209)	133 (97, 182)	0.92
Model 2 <sup>c</sup>	125 (91, 172)	127 (93, 172)	160 (119, 216)	146 (105, 203)	0.55
Model 3 <sup>d</sup>	126 (90, 177)	128 (94, 174)	160 (119, 215)	144 (101, 206)	0.66
Total motile count (millions) <sup>e</sup>					
Crude	85 (60, 121)	81 (56, 115)	91 (64, 129)	81 (57, 115)	0.86
Model 1 <sup>b</sup>	84 (60, 117)	89 (63, 126)	95 (68, 133)	72 (50, 101)	0.40
Model 2 <sup>c</sup>	74 (52, 105)	83 (59, 116)	100 (72, 138)	83 (58, 119)	0.88
Model 3 <sup>d</sup>	77 (53, 111)	84 (59, 117)	100 (72, 139)	80 (54, 118)	0.91
Progressive motile count (millions) <sup>e</sup>					
Crude	78 (55, 112)	75 (52, 108)	85 (60, 122)	73 (51, 104)	0.80
Model 1 <sup>b</sup>	77 (55, 109)	83 (58, 118)	89 (63, 126)	65 (45, 92)	0.35
Model 2 <sup>c</sup>	68 (48, 97)	77 (54, 109)	93 (67, 131)	75 (52, 109)	0.93
Model 3 <sup>d</sup>	70 (48, 103)	77 (54, 110)	94 (67, 131)	72 (49, 108)	0.88
Total normal count (millions)					
Crude	25.5 (16.8, 34.2)	21.5 (12.6, 30.5)	25.4 (16.7, 34.0)	22.2 (13.5, 30.9)	0.73
Model 1 <sup>b</sup>	24.4 (15.9, 32.9)	23.8 (15.1, 32.4)	26.2 (17.8, 34.6)	20.4 (11.6, 29.1)	0.92
Model 2 <sup>c</sup>	23.2 (14.2, 32.2)	23.4 (14.7, 32.0)	27.4 (19.0, 35.8)	20.8 (11.5, 30.0)	0.63
Model 3 <sup>d</sup>	26.4 (16.9, 35.8)	23.7 (15.0, 32.4)	27.7 (19.4, 36.1)	16.9 (7.0, 26.9)	0.20

<sup>a</sup>Estimated using median intake in each quartile as a continuous variable.<sup>b</sup>Adjusted for total energy intake and abstinence time.<sup>c</sup>Adjusted for total energy intake, abstinence time, age, smoking status, alcohol, caffeine, total protein intake, total fat intake, TV viewing hours and physical activity.<sup>d</sup>Adjusted for total energy intake, abstinence time, age, smoking status, alcohol, caffeine, total protein intake, total fat intake, TV viewing hours, physical activity, BMI, and the Prudent and Western dietary patterns.<sup>e</sup>Additionally adjusted for time from ejaculation to start of semen analysis.